



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/535,067

07/13/2005

Wolfgang Huber

2236USWO

1846

43896

7590

12/24/2008

ECOLAB INC.

MAIL STOP ESC-F7, 655 LONE OAK DRIVE

EAGAN, MN 55121

EXAMINER

COMLEY, ALEXANDER BRYANT

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

12/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/535,067
Filing Date: July 13, 2005
Appellant(s): HUBER ET AL.

Amy J. Hoffman
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 7th, 2008 appealing from the Office action mailed March 25th, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: Applicant contends that Claims 7-8, 10-12, and 14 were rejected by Becker in view of Lamadrid. However, Claims 7-8 and 10-14 (13 included) were rejected by Becker in view of Lamadrid.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

Art Unit: 3746

(8) Evidence Relied Upon

4,558,996	Becker	12-1985
4,256,442	Lamadrid et al.	3-1981
4,813,855	Leveen et al.	3-1989

(9) Grounds of Rejection**DETAILED ACTION****Status of Claims**

1. Claims 7-14 are now pending in the current amended application. After non-final rejection, applicant has amended the claim language of Claims 7-11, has left Claim 12 in its originally presented form, and has added new Claims 13 and 14. Claims 1-6 remain cancelled.

Claim Rejections - 35 USC § 103

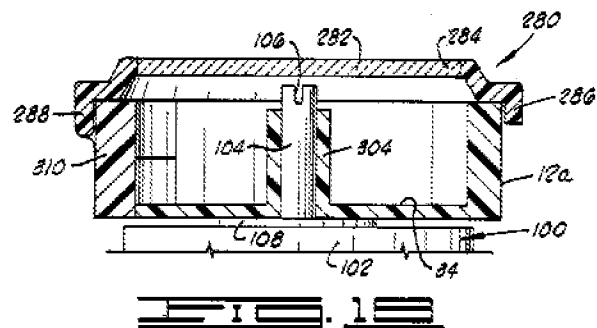
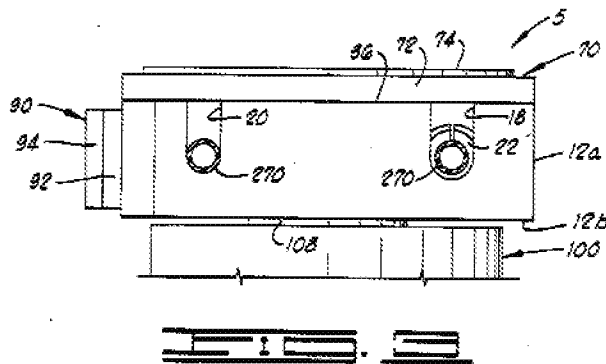
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 7-8 & 10-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent to Becker (4,558,996) in view of United States Patent to Lamadrid (4,256,442).

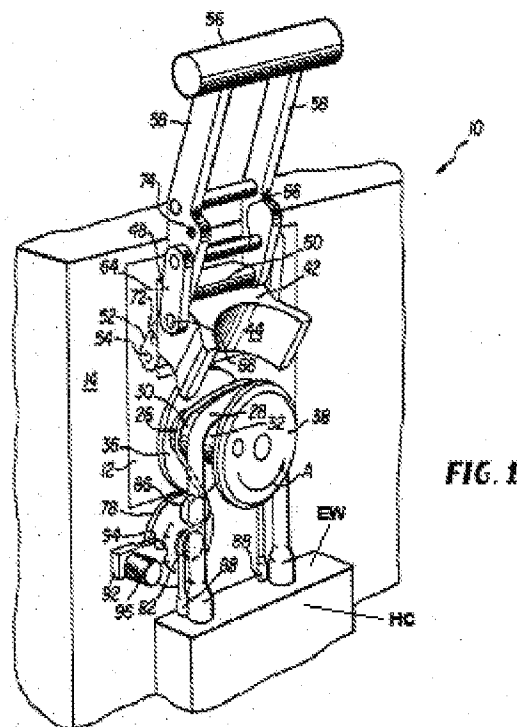


Regarding Independent **Claim 7**, and in reference to figures 3 and 15 shown immediately above, the Becker portion of the combination discloses:

A peristaltic pump (5) comprising: a) a base element (12b); b) an end wall (108) on one side of the base element (12b); c) a U-shaped recess (18, 20) located in the end wall (108); d) a plurality of rotating squeeze rollers (166) located on the base element (12b); e) a replaceable squeeze hose cartridge (22, 270) comprising a squeeze hose carrier (22), a squeeze hose (270), and at least one coupling projection (22) where the coupling projection (22) is configured to rest in the U-shaped recess (18) and the squeeze hose (270) is looped around the squeeze rollers (166) when the squeeze hose cartridge is placed in the pump (5);

As can be seen in the Figures shown above, Becker substantially discloses a peristaltic pump that contains a base, end wall, U-shaped recesses, squeeze rollers, and a replaceable squeeze hose cartridge. In particular, Becker discloses "Fixed stator

member 12a is provided with two openings 18 and 20 for the inlet and output ends of the tubing and have orifices equally designed for accepting at either orifice one pump segment fitting/tube grip/stop 22 which secures the resilient collapsible tubing 270 in a permanent position relative to the fixed stator member 12a, i.e., the tube grip 22 prevents any movement of the resilient collapsible tubing 270 in or out of the fixed stator 12a.” (Column 8, Line 60-69). Clearly, Becker’s fitting 22 serves the same purpose of retaining the hose in the housing of the pump, and is coupled thereto to create a squeeze hose cartridge. However, Becker fails to specifically and substantially disclose a contact wall or pivot lever.



However, in reference to figure 1 shown immediately above, the Lamadrid portion of the combination discloses the remaining claim elements absent from that of the Becker reference. Lamadrid discloses:

Art Unit: 3746

f) a contact wall (44); and g) a pivot lever (56); the contact wall (44) being opposite the squeeze rollers, whereby the contact wall (44) is connected to and movable by the pivot lever (56), wherein the squeeze hose is compressed by the squeeze rollers by moving the pivot lever (56) which engages the contact wall (44) against the squeeze hose.

As shown in Figure 1 above, Lamadrid discloses all remaining claim elements present in Independent Claim 1. In particular, applicant's contact wall is taught by Lamadrid's inner race 44, which serves the same purpose of compressing the pumping tube between it and the opposing squeeze rollers.

Therefore, to one of ordinary skill desiring a peristaltic pump with a faster and more easily loaded squeeze hose cartridge, it would have been obvious to utilize the techniques disclosed in Becker in combination with those disclosed in Lamadrid in order to obtain such a result. Consequently, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Easy Load Peristaltic Pump of Becker with the pivoting arm and contact wall of Lamadrid in order to obtain predictable results; those results being a peristaltic pump that simplifies squeeze hose cartridge removable by integrating the pump's pivoting lever with the removable cartridge.

5. In regards to dependent **Claim 8**, the Lamadrid portion of the combination discloses a pivot lever and base comprised of pivots cams and support detents for receiving these pivot cams. As shown above in Figure 1 shown previously above, support detents for receiving the pivoting cams of the pivot lever mechanism. In

Art Unit: 3746

particular, Lamadrid specifically discloses “Detent means are in fact, however, defined between the operating handle and the links, as well as between the pressure plate housing and the pump base. Such detent means serve a two-fold purpose, the first of which is to additionally insure the fact that the pressure plate is retained in either its open or closed position, and the second purpose is to audibly indicate that the pressure plate has in fact attained either its open or closed position.” (Column 3, Lines 15-25)

Furthermore, Lamadrid discloses the particular placement of the detents and cavities by stating “In order to further insure the retention of the handle and pressure plate in either one of the extreme opened or closed positions, and to audibly indicate to the operator the fact that the handle and pressure plate components have attained one of the extreme positions, detent means may be provided. Such means may take the form of a simple, spring-biased button or ball which operatively cooperates with a mating cavity.

With respect to retaining the handle and pressure plate assembly in the opened position, the detent button may be provided upon each of the exterior sidewalls of the pressure plate as indicated by the reference character 70, the cooperating cavities 72 being provided upon the interior sidewalls 50 of the pump base 12.” (Column 6, Lines 26-39) Regarding dependent **Claims 10-11**, the Becker portion of the combination discloses the use of a detent tongue provided on an end wall, as well as a counter detent provided on the pivoting lever. In particular, as shown in Figure 3, Becker shows a detent member 12a, along with two U-shaped slots 18 and 20 for accepting and retaining the squeeze hose. In particular, Becker discloses “Fixed stator member 12a is provided with two openings 18 and 20 for the inlet and output ends of the tubing and

Art Unit: 3746

have orifices equally designed for accepting at either orifice one pump segment fitting/tube grip/stop 22 which secures the resilient collapsible tubing 270 in a permanent position relative to the fixed stator member 12a, i.e., the tube grip 22 prevents any movement of the resilient collapsible tubing 270 in or out of the fixed stator 12a.”

(Column 8, Lines 60-69) Furthermore, as shown in Figure 15, Becker discloses a counter detent 286 for detenting with the detent member 12a to restrain the pivoting cover from opening. In particular, Becker discloses “In this alternate embodiment, front flap 286 may fit in snapping engagement over the front portion of fixed stator member 12a (not shown). This alternate embodiment is further provided with a remote offset hinge and flap 288 which rotates around common axis hinge pins 290 so that the alternate door assembly 280 may comfortably rotate vertically about the door stator 310 (not shown) once the front flap 286 of lid 280 is unsnapped from the fixed stator member 12a.” (Column 13, Lines 13-22) In regards to dependent **Claim 12**, please see the analysis of Independent Claim 7 above regarding the squeeze hose carrier 22.

Regarding dependent **Claim 13**, the claim language fails to define, in particular, which surface the base must be, or must not be, attached thereto. Consequently, because both Becker and Lamadrid utilize fastening means (bolts, screws) only for attaching various pump part surfaces to the base of the pump, both teach the language of Claim 13. Regarding dependent **Claim 14**, the Becker portion of the combination substantially discloses the use of an end wall 108 containing sliding guides (18, 20), as well as coupling projections provided with the squeeze hose cartridge. In particular, Becker’s openings (18, 20) are designed to guide the squeeze hose during vertically sliding

Art Unit: 3746

engagement with the base of the pump. Please see analysis for Claims 10-11 regarding these openings. Furthermore, as can be seen in Figures 1, 6, & 7 (not shown above), Becker's cartridge (22, 270) also clearly shows two squeeze hose couplings extending from the housing of the pump.

Therefore, to one of ordinary skill desiring a peristaltic pump with a faster and more easily loaded squeeze hose cartridge, it would have been obvious to utilize the techniques disclosed in Becker in combination with those disclosed in Lamadrid in order to obtain such a result. Consequently, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the pump of Becker with the pivoting arm and detent supports of Lamadrid in order to obtain predictable results; those results being a peristaltic pump that simplifies squeeze hose cartridge removal/insertion by utilizing a detenting pivot lever and latching end wall.

6. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent to Becker (4,558,996) in view of United States Patent to Lamadrid (4,256,442) as applied to claims 7-8, 10-12, & 14 above, and further in view of United States Patent Leveen (4,813,855).

In regards to dependent **Claim 9**, and in reference to Figure 1 immediately above, the Leveen portion of the combination discloses guides (36) for receiving slide rails (38) of a tube-engaging cover (19) that are provided on the housing base (9). Leveen specifically discloses guide slots 36 provided on the housing base 9 for guiding and receiving the cover's projections 38. Furthermore, Leveen specifically discloses a housing cover operation that is the same as applicant's housing cover operation by disclosing, "Pump housing 9 is provided with vertical slots 36 in mounting plate 42 to receive the projections 38 on the shoe 19 which permits vertical movement of the shoe 19 against the face of plate 42 of the pump housing. This vertical movement of the shoe 19 permits opening as shown in FIGS. 2 and 3 of the drawings and closing to engage the flexible tube with the rollers 16 and roller housing 17 as shown in FIG. 4." (Column 3, Lines 36-43)

Art Unit: 3746

Therefore, it would have been obvious to one of ordinary skill in the art of peristaltic pumps to modify the pressure plate movement system of the Becker-Lamadrid combination with the slidable housing cover of Leveen in order to obtain predictable results; those results being simpler and more efficient housing cover design and operation.

(10) Response to ArgumentArguments Concerning Claims 7-8 & 10-14

I) In regards to Applicant's argument that Lamadrid fails to disclose a replaceable squeeze hose cartridge, the Examiner must respectfully assert that that the Lamadrid reference was only utilized for its pivot lever and contact wall mechanism, and that the primary Becker reference does, in fact, disclose such a cartridge (22, 270). In particular, Becker discloses the use of a squeeze hose 270 and tube grip 22 structure that is vertically removable from the pump housing. Moreover, Becker states "When latch 90 is open and the door stator 50 is pivoted about the fixed stator 12a, tubing 270 can be easily removed from the pump, inasmuch as tube grip 22 in the tubing can be vertically removed from the pump through one pulling action." (Column 10, Lines 9-13) Applicant's use of the term "cartridge" is a broad word that fails to specifically describe any particular structure. The term "cartridge", as defined by Merriam-Webster's dictionary, is simply "*a case or container that holds a substance, device, or material which is*

Art Unit: 3746

difficult, troublesome, or awkward to handle and that can be easily changed".

The Examiner must assert that Becker's tube grip 22 and squeeze hose 270 is a container for holding a fluidic substance which can be easily changed (i.e. removed from the pump housing) (See Column 10, Lines 9-13). Furthermore, Applicant's claimed "cartridge" fails to define any particular structure other than that it contains a squeeze hose carrier (22), the squeeze hose (270), and at least one coupling projection (Tubing Inlet/Outlet; See Figures 1-3 and 6) resting in the U-shaped groove. Therefore, the Examiner must assert that Becker does, in fact, disclose Applicant's cartridge as claimed.

II) In regards to Applicant's argument that the Lamadrid reference does not provide a pump tube that is easy to access, the Examiner must respectfully assert that Lamadrid does, in fact, provide a simple way of accessing the pump tube. In particular, Lamadrid states "An improved peristaltic pump includes a pivotably mounted pressure plate which, together with the pump roller elements, defines the pump chamber. The pivotal mounting of the pressure plate facilitates accessibility to the pump chamber in order to simplify the pump tube loading and unloading procedures." (Abstract) Hence, the Examiner must assert that Lamadrid is designed to solve the same tube removal issue described by Applicant, and does so in the same way through use of a pivot lever and hose contact wall.

Art Unit: 3746

Arguments Concerning Claim 9

III) In regards to Applicant's argument that Leveen does not teach or suggest a replaceable cartridge, the Examiner must respectfully assert that that the Leveen reference was only utilized for its slide rails (38) and guides (36), and that the primary Becker reference does, in fact, disclose such a cartridge (22, 270).

Please see the arguments concerning Claims 7-8 and 10-14 regarding Becker's replaceable cartridge.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Alexander B Comley/

Examiner, Art Unit 3746

/Devon C Kramer/

Supervisory Patent Examiner, Art Unit 3746

Conferees:

/Devon C Kramer/

Supervisory Patent Examiner, Art Unit 3746

/Thomas Denion/

SPE AU 3748